



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,422	08/08/2001	Osamu Tsujii	35.C15675	9933

5514 7590 08/14/2002

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

GENCO, BRIAN C

ART UNIT	PAPER NUMBER
----------	--------------

2615

DATE MAILED: 08/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

gc

Office Action Summary

Application No.

09/923,422

Applicant(s)

TSUJII ET AL.

Examiner

Brian C Genco

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Examiner's Notes

Examiner notes that two different priority dates have been filed in the application for the Japan 245192/2000 foreign application, one being 8/11/01 as found in the patent application transmittal forms and the other being 8/11/00 as found in the declaration. Examiner used the priority date of 8/11/00 in consideration of this application, however this discrepancy must be attended to.

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in 09/923,422 on 8/8/01. It is noted, however, that applicant has not filed a certified copy of the Japan 245192/2000 application or the Japan 235052/2001 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (e) the invention was described in-
 - (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in

Art Unit: 2615

section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-4, 10, 12, 14, and 15 are rejected under 35 U.S.C. 102(e) as being unpatentable by (US 2001/0028392 A1 to Yamamoto et al).

In regards to claim 1 Yamamoto discloses in figure 1 "an image sensor having a plurality of pixels (paragraph 0002, lines 2-3, Yamamoto)," or a "sensor region including a plurality of pixels for detecting an object." Yamamoto further discloses in figure 11 "block BL2 includes the sample and hold control circuit 13, the sample and hold circuits14, the horizontal scanning circuit 15, the amplifier circuit 17 and the A/D converter circuit 19 (paragraph 0101, lines 2-5, Yamamoto)," whereby the block BL2 is a "read-out circuit adapted to sequentially read out signals from the plurality of pixels into a common output portion." Yamamoto further discloses in figure 11 "the power source circuit 21 supplies power source voltages to circuits at all times when the mode signal indicate a normal

Art Unit: 2615

mode. The power source circuit 21 supplies the power source voltage to a block BL1 during an enable signal EN1 from a power source control circuit 22 is active and ceases the supply during the signal EN1 is inactive, while supplying the power source voltages to a block BL2 during an enable signal EN2 from the power source control circuit 22 is active and ceases the supply during the signal EN2 is inactive (paragraph 0100, lines 2-11, Yamamoto)," whereby "the block BL1 includes the pixel array 10 and the vertical scanning circuit (paragraph 0101, lines 1-2, Yamamoto)," and block BL2 is the "read-out" circuit as discussed above.

In regards to claim 2 see examiners notes on the rejection of claim 1. Note that Yamamoto discloses a power source circuit, element 21 of figure 11, and a power source control circuit, element 22 of figure 11, whereby it is inherent to have part of the power source control circuit "adapted to supply the power to said sensor region," where that part of the power source control circuit would be a "first power circuit." Further, it is inherent to have part of the power source control circuit "adapted to supply power to said read-out circuit" where that part of the power source control circuit would be a "second power circuit."

Art Unit: 2615

In regards to claim 3 see examiner notes on the rejection of claim 2. Note that it is also inherent in the power source control circuit to have logic or "a first switch adapted to supply power to said sensor region," as well as to have logic or "a second switch adapted to supply power to said read-out circuit."

In regards to claim 4 see examiners notes on the rejection of claim 1. Note that the "control circuit adapted to control said power supply unit" is the power source control circuit in figure 11, element 22. Also note that the power is supplied to block BL1 at the "first timing" by the enable signal EN1 and block BL2 at a "second timing after said first timing" by the enable signal EN2. As further illustration of the above see figure 12.

In regards to claim 10 see examiners notes on the rejection of claim 1. Note that Yamamoto discloses the "read-out circuit" "block BL2 includes ... the amplifier circuit 17 (paragraph 0101, lines 2-5, Yamamoto)."

In regards to claim 12 see examiners notes on the rejection of claims 1 and 4. Note in figure 12 that when supplying power to block BL2 power is simultaneously being supplied to block BL1, or in other words power is being supplied "to a second

Art Unit: 2615

region including the first region and larger than the first region at a second timing after the first timing."

In regards to claim 14 see examiners notes on the rejection of claim 1.

In regards to claim 15 see examiners notes on the rejection of claim 12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5-9, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 2001/0028392 A1 to Yamamoto et al).

In regards to claim 5 Yamamoto discloses "an image sensor ... for use in such an electronic camera, an image reader or facsimile (paragraph 0002, lines 2-4, Yamamoto)." Image readers and/or facsimiles typically have illuminators that supply radiation (light) necessary for their operation. Yamamoto also discloses a timing control circuit, element 20 in figure 11, to control the timing of the image sensor in figure 11, however Yamamoto does not specifically disclose what events trigger the

Art Unit: 2615

timing control circuit (paragraphs 0103 and 0104, Yamamoto). It would have been obvious to one of ordinary skill in the art at the time of the invention to configure the disclosed timing control circuit to coincide with the operation of a "radiation generation," whereby "based on a first operation timing of a radiation generator," namely turning it on, the timing control circuit sets forth the necessary operations in order to "supply the power to said sensor region," since the sensor region operates as to capture an image once illumination is provided. Then, "based on a second operation timing after said first operation timing of said radiation generator," namely after charges have accumulated in the sensor region, the timing control circuit further sets forth the necessary operations in order to "supply the power to said read-out circuit."

In regards to claims 6 and 7 see examiners notes on the rejection of claim 5. Note that the "ready-request signal for bringing said radiation generator into a state ready for radiation exposure" is the same as the "first operation timing of a radiation generator," namely turning the radiation generator on. Further note that the supply of power to the read-out circuit clearly would be based on a "request for exposure to said radiation generator" and completion thereof since operation of the radiation generator is necessary for the

Art Unit: 2615

image taking operation when the device is used as an image reader or facsimile device.

In regards to claim 8 see examiners notes on the rejection of claim 5. Note that Yamamoto discloses in figure 12 a time when "no power is supplied to said sensor and to said read-out circuit, after completion of read-out of signal from said read-out circuit." Yamamoto further discloses "in response to the rising edge of a vertical sync signal VSYNC, the count of the counter 23 becomes 2 and the enable signals EN1 and EN2 go low to cease the supply of the power source voltages to the blocks BL1 and BL2.

In regards to claim 9 see examiners notes on the rejection of claims 5 and 8. Note in figure 12 the transition from the "Power-off Period (paragraph 0115, Yamamoto)," where the power is turned off for both the image sensor and the read-out circuit, to the "Light Integration Period (paragraph 0108, Yamamoto)," where the power to the image sensor is on and the power to the read-out circuit is off whereby both of these transitions take place after the completion of the first "Reading-out Period (paragraph 0111, Yamamoto)."

In regards to claim 11 see examiners notes on the rejection of claims 1 and 7. Note that "before radiation exposure" the image sensor has power, or "part of said sensor and read-out

Art Unit: 2615

circuit" has power. Further note that "after completion of radiation exposure" both the image sensor and read-out circuit have power, or "power is supplied to the whole of said sensor and read-out circuit."

In regards to claim 13 see examiners notes on the rejection of claims 7 and 12.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(USPN 5,109,155 to Mukainakano et al)

(USPN 4,996,413 to McDaniel et al)

(USPN 4,901,336 to Nishiki)

(US 2002/0050568 A1 to Nonaka)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian C. Genco who can be reached at 703-305-7881. The examiner can normally be reached on Monday thru Friday 8:00am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on 703-308-9644. The fax phone numbers for the organization where this application or proceeding is assigned

Art Unit: 2615

are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology center 2600 customer service office whose telephone number is 703-306-0377.

Brian C Genco
Examiner
Art Unit 2615

August 9, 2002



**ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**